Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

Bd 6 Library

Cop 1

CIRCULAR No. 220 MARCH, 1932
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

THE BRAINERD BLACKBERRY

By George M. Darrow, *Senior Pomologist*, and George F. Waldo, *Assistant Pomologist, Division of Horticultural Crops and Diseases, Bureau of Plant Industry*[1]

CONTENTS

	Page
Origin and adaptation	1
Naming and introduction	1
Characterization	2
Technical description	4
Planting distance and training	4

ORIGIN AND ADAPTATION

The Brainerd variety of blackberry originated as a cross of the Himalaya and an eastern erect-growing variety (possibly Georgia Mammoth). The cross was made by the senior writer in a garden in Atlanta, Ga., in 1919, and the seedling was grown at the United States Plant Field Station near Glenndale, Md., in 1920. It has been fruited at this station and also at the coastal plain branch station of the North Carolina Department of Agriculture, Willard, N. C., at the Oregon Agricultural Experiment Station, Corvallis, Oreg., at the Western Washington Experiment Station, Puyallup, Wash., and at Chino, Calif.

Its desirable qualities are the extreme vigor of the plants, their productiveness, their entire hardiness where tried, and the large size and high dessert quality of the fruit when fully ripe. Its weaknesses are (1) the large prickles (like its mother parent, Himalaya), (2) a peculiar variegation of its leaves, (3) lack of quality, like most eastern varieties, until fully ripe, (4) susceptibility to the orange-rust disease in the Eastern States, and (5) a slight susceptibility to the double-blossom disease in the Southeastern States. Because of its wide adaptation, vigor, and productiveness and the high quality of its fruit, it is suggested for trial in the region from Maryland to Texas and in the regions of the Pacific Coast States that have hot summers. Canning, preserving, and frozen-pack tests at the Oregon Agricultural Experiment Station indicate its desirability for these purposes and its superiority over the Himalaya.

NAMING AND INTRODUCTION

The Brainerd variety was named in memory of Ezra Brainerd, former president of Middlebury College, Vermont, who contributed much to the understanding of American blackberries.

---

[1] Utilization tests by Thomas Ornsdorff, of the Oregon Agricultural Experiment Station, are gratefully acknowledged.

Plants of the Brainerd variety are available through purchase from cooperating nurseries in North Carolina, Ohio, and California. The United States Department of Agriculture has no plants for distribution.

CHARACTERIZATION

Because the value of a new variety may be best appreciated when it is compared with a variety that it may replace or that is widely known, the Brainerd is here chiefly compared with its mother parent, the Himalaya. In general its habit resembles this sort, except that its canes grow somewhat higher before recurving and are somewhat thicker (averaging 1 inch in diameter, as compared with 0.76 inch of the Himalaya). (Fig. 1.) Its canes grow about as long but branch more freely. Its prickles are similar though much less red. Its leaves are hairy below, but not as whitish as those of the Himalaya; the leaf margins are more doubly and deeply serrate. The leaflets are not as long and are lighter green, with less prickly petiolules and with leaf tips more acuminate. After maturity a part of each leaflet turns a lighter shade of green, giving them a variegated appearance. The lighter areas probably manufacture relatively less carbohydrates than do the darker areas and give the plants a poor appearance at times. However, the plants are still very productive under conditions so far tested.

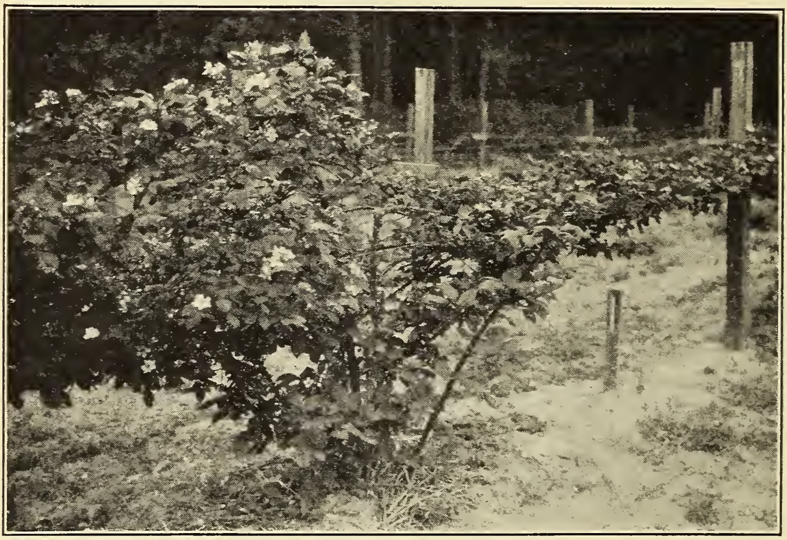

FIGURE 1.—A 1-year-old plant of the Brainerd blackberry at Willard, N. C., trained to a 2-wire horizontal trellis

The inflorescence is quite glandular and hairy, whereas that of the Himalaya is not glandular but much more hairy. The inflorescence is nearly as large as that of the Himalaya, clusters with as many as 141 flowers having been observed. The flowers are larger, with longer petals, and not quite so deep a pink as Himalaya, and the first to open in a cluster are often semidouble.

The berries are from 30 to 60 per cent (probably averaging 50 per cent) larger and heavier than the Himalaya, having as large a diameter but being much longer than that sort and similar to the Eldorado in shape. (Fig. 2.) They remain red longer, ripen more slowly, are somewhat firmer, and are of very high flavor, similar to that of the Himalaya, when fully ripe. Before being fully ripe the Brainerd is tart and does not have such high flavor as the Himalaya in the Northwest or the Eldorado in the Northeast. Though it may ripen as early or earlier, it apparently needs more heat to ripen, and in cool falls, in the Northwest, it may ripen very slowly. Seeds of the Himalaya are about 18 per cent larger and seeds of the Evergreen about 41 per cent larger than those of the Brainerd.

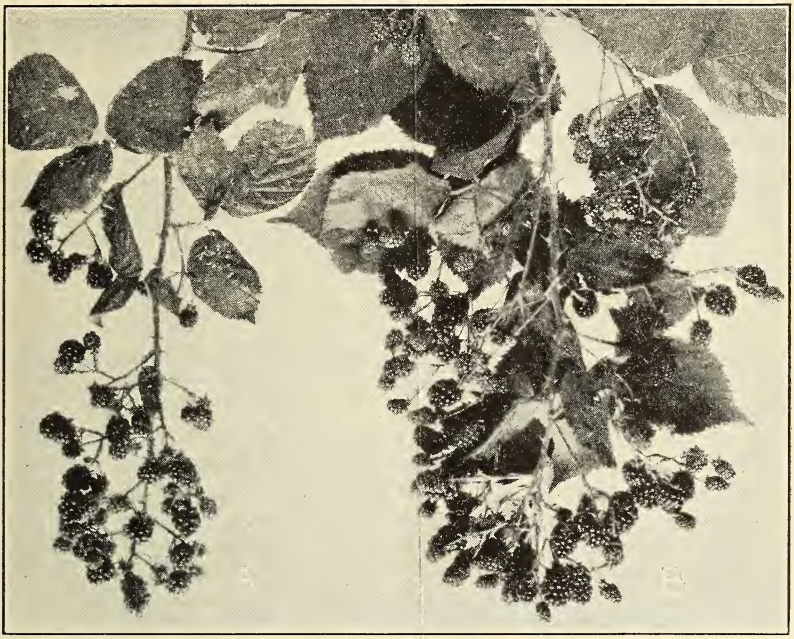

FIGURE 2.—A, Himalaya; B, Brainerd. Note the relatively larger berries of the Brainerd, which averages about 50 per cent larger than those of the Himalaya. The size of the fruit clusters varies from the immense size shown here, with 141 berries, to the small clusters of the ordinary blackberry

The Brainerd is propagated fairly freely by tip layering and very freely by root cuttings.

No large fields of the Brainerd are yet in fruiting, but several plants in fruiting at the different stations indicate that it is more productive than the Himalaya in regions where the latter is grown, and that it is one of the most productive of all blackberries wherever it is hardy. At the Glenndale (Md.) and Willard (N. C.) stations, where the Himalaya is not always hardy, the Brainerd has never shown any injury from cold. Although the Brainerd is susceptible to orange rust, if the affected plants are dug out whenever the disease appears it should not prove difficult to control. Double-blossom disease is apparently not serious on this sort, even in North Carolina, where the Evergreen is so susceptible that it can not be raised profitably. However, growers in Southern States should watch for this disease and pick off affected buds whenever seen.

TECHNICAL DESCRIPTION

Plants are usually vigorous, susceptible to orange rust and slightly susceptible to double-blossom, resistant to leaf spots and anthracnose. Canes are erect at first, then arching, laterals trailing; stout, with diameter up to 1.1 inches, length up to 20 feet; green changing to red; angled, nearly glabrous; prickles stout, generally recurved, numerous. Leaflets, five, basal ones nearly sessile (petiolule 0.1 to 0.2 inch), terminal with very long petiolule (about 1.4 inches), lateral ones long (about 0.8 inch), acuminate, very hairy below when mature; with variegated mature leaves, the outer parts of the leaves becoming yellowish green to cross veins, doubly and deeply serrate petiolules and midribs prickly, stipules linear-subulate, long (about 0.8 inch).

Inflorescence variable in size from those of eastern blackberries to the immense ones of the Himalaya, with as many as 141 flowers and fruits, leafy, glandular hairy; flowers large, with long pink petals, terminal flower often semidouble, self-fertile.

Berries large, cylindrical, black, average about 84 drupelets each, 4 gm. average weight, largest 6 gm.; glabrous; very high quality; seeds large, average weight 2.6 gm. Season in Oregon, August and September, ripening after the erect varieties and covering a long season; in eastern North Carolina, July; in Maryland, July and August.

PLANTING DISTANCE AND TRAINING

The Brainerd should be planted at about the same distance as the Himalaya—8 by 12 to 14 feet in the West, and 8 by 10 to 12 feet in the East.

The training of the Brainerd should in general be like that of the Himalaya. However, because the canes grow to such a large diameter and to such great length, their training must be systematic from early spring. The new shoots should be topped as soon as they reach the height of 3½ to 5 feet, depending on the height of the trellis. If the lower wires are 3½ feet from the ground and the canes are topped at that height, one or two strong laterals can be trained in each direction. Secondary branches from these should be pruned off in the second spring before growth starts. In the fall, winter, or spring the canes should be raised to the upper two wires of the trellis (about 5 feet high), leaving the lower two wires for the new shoots as soon as they start.

U. S. GOVERNMENT PRINTING OFFICE: 1932

For sale by the Superintendent of Documents, Washington, D. C. - - - - - - Price 5 cents

ERRATUM

U. S. Department of Agriculture, Circular 220.
"The Brainerd Blackberry."

On page 4, under "Technical Description," in the last paragraph, the weight of the seed should be given as 2.6 mg., instead of 2.6 gm.

NATIONAL AGRICULTURAL LIBRARY
1022831630